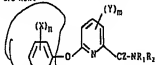


92-155374/23 SHEL 90.11.28
 SHELL INT RES MUJ 68
 90.11.28 90GB-025828 (92.04.03) COTD 213/66, A01N 43/40,
 COTD 213/78, 213/81, 213/83
 New 2-phenoxypyridine-6-(thio)carboxamide derivs. - useful as
 herbicides, against grasses and broadleaf weeds with selectivity to
 small grain cereals (Eng)
 CY248488 RYAT BE CH OE OK ES FR GE GR IT LU NL SE
 Addnl. Data: FOSTER C J, GILKESON T, STOCKER R, GLANDRE J J
 91.11.28 91EP-203922

2-Phenoxypyridine-6-(thio)carboxamide derivs. of formula
 (I) are new:



$n = 1-5$;
 $X =$ H; halo; alkyl or alkoxy (opt. subst. by halo, CN,
 OH and/or alkoxy), CH_3 , NO_2 , alkenyloxy, alkynyloxy,
 alkylthio, haloalkylthio, alkenylthio or alkynylthio;
 $m = 1-3$;
 $Y =$ halo, alkyl or haloalkyl;

CP-D4, 12-P8)

$Z = 0$ or S ;

$R_1, R_2 =$ H, alkyl opt. subst. by 1 or more of halo, OH,
 CN, alkoxy, alkylthio, alkoxybenzyl or mono- or
 di-alkylamino, alkenyl, alkynyl, cycloalkyl, or opt.
 subst. cycloalkylalkyl, or OH, alkoxy, alkenyloxy,
 alkynyloxy, alkoxybenzyl, NH_2 ; mono- or di-
 alkylamino, alkoxybenzylamino, arylamino opt.
 subst. by halo, or dialkylcarbamoyl;

or $R_1 + R_2 =$ alkylene opt. interrupted by O, S or HR;

$R =$ H or alkyl.

MORE SPECIFICALLY

$n = 1-2$ (esp. 1);

$X =$ H, F, Cl, Br, NO_2 , Et, OMe or CF_3 (esp. 3- CF_3),

3-OMe or 3-Cl);

$R_1 =$ H, 1-4C alkyl or 2-4C alkenyl (esp. H);

$R_2 =$ H, 1-8C alkyl, 1-4C alkyl subst. by F, OH, CN, OMe,

OEt, COOMe, COOEt or mono- or di-(1-2C alkyl)-

amino, 2-6C cycloalkyl, 2-4C alkenyl, 2-4C alkynyl,

1-4C alkoxy, 1-4C alkylamino, 2-4C alkenyloxy,

COOMe, COOEt, 3-7C alkoxybenzylamino, di(1-3C

EP-488474-A*

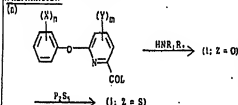
alkylcarbamoyl, arylamino (opt. subst. by halo) or
 halo-(3-6C)cycloalkyl-(1-4C)alkyl (esp. Et, Pr, cyclo-
 propyl or cyclobutyl);
 or $R_1 + R_2 = (\text{CH}_2)_4$, $(\text{CH}_2)_5$, $\text{O}(\text{CH}_2)_2$ or $(\text{CH}_2)_2\text{NR}(\text{Gr})_2$;
 $R =$ Me or Et.

USE/ADVANTAGE

(1) are herbicides active against a wide spectrum of
 grasses and esp. broadleaved weeds (e.g. blackgrass, wild
 oat, giant foxtail, green foxtail, morning glory, cleavers,
 black nightshade, speedwell and chickweed), when applied
 pre- or post-emergence. They exhibit selectivity to small
 grain cereals (e.g. maize, wheat, barley and rice) and to
 broad-leaf crops (e.g. soya, sunflower and cotton).

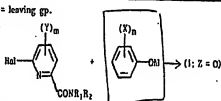
Application rate is 0.01-10 (pref. 0.05-4) kg/ha.

PREPARATION



L = leaving gp.

(b)



$\text{N} =$ alkali metal.

EXAMPLE

A mixt. of 6-(3-trifluoromethylphenoxy)picolinic acid
 (1.5g) and SOCl_2 (20 ml) was refluxed for 1 hr. Excess
 SOCl_2 was evapd. in vacuo and CH_2Cl_2 (20 ml) added.
 A soln. of *n*-propylamine (8.6g) and Et_3N (1g) in CH_2Cl_2
 (20 ml) was added dropwise at ambient temp.

After work-up, the residue was purified by silica gel
 chromatography, eluting with 5% (v/v) ether/ CH_2Cl_2 , to
 give 1.5g. *N*-*n*-propyl-2-(3-trifluoromethylphenoxy)-6-
 pyridinecarboxamide (1a) as an oil.

(1a) was applied (pre-emergence) at (a) 5 and (b) 1
 kg/ha. 12 Days after appln. herbicidal effect (0 = no
 effect; 9 = complete kill) was assessed visually.

EP-488474-A*/1

92-155374/23

Results were:

(a): barnyard grass (BG), oats (O), mustard (M), sugar-
 beet (SB) 9; maize (Ma), rice (R), linseed (L) 9; soya-
 bean (S) 7.

(b): BG, M, SB 9; O 8; S 7; Ma, R, L 6.

(38p98SPDPDNaO/0).

SR: L. Int. Ref EP 176 EP 33011 JP 63017811 US 4251263 US 4270946

EP-488474-A/2

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